

WHAT IS CLAIMED

1 1. A system for supporting transacted remote file operations between a
2 local device and a remote device, the system comprising:
3 a transaction manager; and
4 a redirector to receive a request to perform a file operation on a file residing
5 in the remote device, the local and remote devices connected to a network, wherein the
6 redirector is to send the request to the remote device over the network within a
7 transaction.

1 2. A system according to Claim 1, wherein the transaction manager is
2 not integrated into a file system.

1 3. A system according to Claim 1, wherein the redirector is receive file
2 information from the remote device that includes a file system identifier (Fid) and a
3 version identifier associated with the file.

1 4. A system according to Claim 3, wherein the redirector is to
2 selectively create a file control block (FCB) associated with the file, the FCB including
3 the Fid and version identifier information associated with the file.

1 5. A system according to Claim 4, wherein the redirector is to
2 determine whether an existing FCB can be used for the request.

1 6. A system according to Claim 5, wherein the redirector is to
2 determine whether an existing FCB that is associated with an uncommitted transaction
3 can be used for the request.

1 7. A system according to Claim 5, wherein the redirector, in
2 determining whether an existing FCB can be used for the request, is to compare a
3 pathname and transaction context for the request with a pathname associated with the
4 existing FCB.

1 8. A system according to Claim 1, wherein the transaction manager is a
2 kernel level transaction manager.

1 9. A system according to Claim 1, wherein the redirector is to
2 selectively indicate in the request that the remote device should signal the local machine
3 responsive to a file operation being performed on the file that was not requested by the
4 redirector.

1 10. A system according to Claim 1, wherein the redirector sends the
2 transaction with request using a protocol based on a server message block (SMB)
3 protocol.

1 11. A system according to Claim 10, wherein the protocol supports non-
2 transacted remote file operations.

1 12. A computer-readable medium having stored thereon components as
2 recited in Claim 1.

1 13. A system for supporting transacted remote file operations between a
2 local device and a remote device, the system comprising:

3 a server component (SRV) to receive a request from a remote device, the
4 request being for a transacted file operation on a file residing in the local device;

5 a transaction manager; and

6 a file system to perform the requested file operation on the file responsive
7 to the SRV component and transaction manager, the local and remote devices connected
8 to a network.

1 14. A system according to Claim 13, wherein the SRV component
2 provides a file system identifier (Fid) and a version identifier associated with the file to
3 the remote device.

1 15. A system according to Claim 13, wherein the transaction manager is
2 a kernel level transaction manager.

1 16. A system according to Claim 13, wherein the file system is to
2 selectively cause the SRV component to signal the remote device responsive to a file
3 operation being performed on the file that was not requested by the remote device.

1 17. A system according to Claim 13, wherein the SRV component sends
2 the transaction with request using a protocol based on a server message block (SMB)
3 protocol.

1 18. A system according to Claim 17, wherein the protocol supports non-
2 transacted remote file operations.

1 19. A computer-readable medium having stored thereon components as
2 recited in Claim 12.

1 20. A method of implementing a transacted remote file operation on a
2 local device, the method comprising:
3 receiving a request for a transacted remote file operation;
4 retrieving a transaction;
5 marshalling the transaction;
6 sending the transaction with the request to a remote device over a network;
7 and
8 receiving from the remote device information resulting from the file
9 operation.

1 21. A method according to Claim 20, wherein information received from
2 the remote device includes a file identifier (Fid) and a version identifier.

1 22. A method according to Claim 21, wherein receiving a request for a
2 transacted remote file operation further comprises:

3 determining whether the request is for a file operation on remote device;

4 providing a name for the request if the request is for a file operation on a
5 remote device; and

6 selectively creating a file control block (FCB) associated with the file, the
7 FCB including the Fid and version identifier information associated with the file.

1 23. A method according to Claim 22, wherein selectively creating a FCB
2 further comprises determining whether an existing FCB can be used for the request.

1 24. A method according to Claim 23, wherein determining whether an
2 existing FCB can be used for the request further comprises determining whether the
3 existing FCB is associated with an uncommitted transaction.

1 25. A method according to Claim 23, wherein determining whether an
2 existing FCB can be used for the request, further comprises comparing a pathname and
3 transaction context for the request with a pathname associated with the existing FCB.

1 26. A method according to Claim 20, wherein the method is performed
2 in a kernel mode.

1 27. A method according to Claim 20, further comprising selectively
2 indicating in the request that the remote device should signal the local machine in

3 response to a file operation being performed on the file that was requested by a device
4 other than the local device .

1 28. A method according to Claim 20, wherein the transaction is sent
2 with request using a protocol based on a server message block (SMB) protocol.

1 29. A method according to Claim 28, wherein the protocol supports non-
2 transacted remote file operations.

1 30. A computer-readable medium having computer-executable
2 instructions to perform operations comprising:
3 receiving a request for a transacted remote file operation;
4 retrieving a transaction;
5 marshalling the transaction;
6 sending the transaction with the request to a remote device over a network;
7 and
8 receiving from the remote device information resulting from the file
9 operation.

1 31. A computer-readable medium according to Claim 30, wherein
2 information received from the remote device includes a file identifier (Fid) and a version
3 identifier.

1 32. A computer-readable medium according to Claim 31, wherein
2 receiving a request for a transacted remote file operation further comprises:

3 determining whether the request is for a file operation on remote device;
4 providing a name for the request if the request is for a file operation on a
5 remote device; and
6 selectively creating a file control block (FCB) associated with the file, the
7 FCB including the Fid and version identifier information associated with the file.

1 33. A computer-readable medium according to Claim 32, wherein
2 selectively creating a FCB further comprises determining whether an existing FCB can be
3 used for the request.

1 34. A computer-readable medium according to Claim 33, wherein
2 determining whether an existing FCB can be used for the request further comprises
3 determining whether the existing FCB is associated with an uncommitted transaction.

1 35. A method of implementing a transacted remote file operation
2 between a local device and a remote device, the method comprising:
3 receiving a request from a remote device, the request being for a transacted
4 file operation on a file residing in the local device, the local and remote devices being
5 connected to a network; and
6 performing the requested file operation on the file, the file operation being
7 part of the transaction.

1 36. A method according to Claim 35, further comprising providing a file
2 system identifier (Fid) and a version identifier associated with the file to the remote
3 device.

1 37. A method according to Claim 35, wherein the method is performed
2 in a kernel mode.

1 38. A method according to Claim 35, further comprising selectively
2 signaling the remote device responsive to a file operation being performed on the file that
3 was not requested by the remote device.

1 39. A method according to Claim 35, wherein the local and remote
2 device selectively communicate over the network using a protocol based on a server
3 message block (SMB) protocol.

1 40. A method according to Claim 39, wherein the protocol supports non-
2 transacted remote file operations.

1 41. A computer-readable medium having computer-executable
2 instructions to perform operations comprising:

3 receiving a request from a remote device, the request being for a transacted
4 file operation on a file residing in the local device, the local and remote devices being
5 connected to a network; and

6 performing the requested file operation on the file, the file operation being
7 part of the transaction.

1 42. A computer-readable medium according to Claim 41 wherein the
2 operations further comprise providing a file system identifier (Fid) and a version
3 identifier associated with the file to the remote device.

1 43. A computer-readable medium according to Claim 41, wherein the
2 operations are performed in a kernel mode.

1 44. A computer-readable medium according to Claim 41, wherein the
2 operations further comprise selectively signaling the remote device responsive to a file
3 operation being performed on the file that was not requested by the remote device.

1 45. A system for supporting transacted remote file operations between a
2 local device and a remote device connected to a network, the system comprising:
3 means for managing transactions; and
4 means for sending a request with a transaction to the remote device to
5 perform a file operation on a file residing in the remote device.

1 46. A system according to Claim 45, further comprising means for
2 receiving file information from the remote device that includes a file system identifier
3 (Fid) and a version identifier associated with the file.

1 47. A system according to Claim 46, further comprising means for
2 selectively creating a file control block (FCB) associated with the file, the FCB including
3 the Fid and version identifier information associated with the file.

1 48. A system according to Claim 47, further comprising means for
2 determining whether an existing FCB can be used for the request.

1 49. A system according to Claim 48, further comprising means for
2 determining whether an existing FCB that is associated with an uncommitted transaction
3 can be used for the request.

1 50. A system according to Claim 45, further comprising means for
2 selectively indicating in the request that the remote device should signal the local
3 machine responsive to a file operation being performed on the file that was not requested
4 by the redirector.

1 51. A system according to Claim 13, wherein the transaction manager is
2 not integrated into a file system.

1 52. A method for use in performing a transaction file operation over a
2 network, the method comprising:
3 receiving a pre-prepare notification from a transaction manager residing in
4 a first computing platform;

5 providing file operation data from the first computing platform to a second
6 computing platform via the network;
7 receiving a prepare notification from the transaction manager residing in
8 the first computing platform; and
9 providing a message to the second computing platform containing the
10 prepare notification via the network.

1 53. A method for use in performing a transacted file operation over a
2 network, the method comprising:
3 receiving transaction information; and
4 sending, via the network, the transaction information and a request to create
5 or open a file or directory to a computing platform connected to the network, the request
6 including a first structure, the first structure containing a field to hold transaction context
7 and a field to hold the transaction information's length.

1 54. A method according to Claim 53, wherein a response to the request
2 comprises a second structure that contains a field to hold a file system identifier and a
3 field to hold a version identifier.

1 55. A method according to Claim 53, further comprising receiving a
2 response that includes a field to indicate whether the computing platform connected to
3 the network supports transacted file operations.

1 56. A method according to Claim 53, further comprising sending, via the
2 network, transaction information and a request to find a file to the computing platform,
3 the request to find a file including a field to indicate that a transaction is being used with
4 the file.

1 57. A method according to Claim 53, further comprising receiving, via
2 the network, a message providing notification from the computing platform connected to
3 the network regarding transaction state changes.

1 58. A method for use in performing a transacted file operation over a
2 network, the method comprising:

3 receiving a pre-prepare notification from a first computing platform in a
4 second computing platform;

5 providing the pre-prepare notification to a transaction manager residing in
6 the second computer platform;

7 receiving, via the network, file operation data from the first computing
8 platform in the second computing platform;

9 providing the file operation data to a file system residing in the second
10 computing platform;

11 receiving, via the network, a prepare notification from the first computing
12 platform; and

13 providing the prepare notification to the transaction manager residing in the
14 second computing platform.